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ABSTRACT

This study compared the academic performance and classroom behavior of Hmong-refugee first and second graders to those of classmates from other ethnic backgrounds. Two cohorts of children and families from six inner-city Saint Paul (Minnesota) elementary schools participated in this ongoing longitudinal study, for a total of 528 children entering kindergarten in 1992-1994. Half attended Head Start, with the remainder drawn from the same classrooms. Nearly half the children in each cohort were Hmong; others were Caucasian, African-American, Hispanic, or American Indian. Findings indicated that compared to other ethnic groups, Hmong children are more likely to live with both biological parents, have more siblings, and move less often. Hmong parents are more likely to be older and married and less likely to have a high school diploma. There was no significant ethnic group difference in reading achievement as assessed on the Woodcock Johnson Tests of Achievement-Revised (WJTA-R). Hmong children entered kindergarten with lower mathematics achievement scores as assessed on the WJTA-R, but these differences disappeared by spring of first grade. Teachers rated Hmong children as more cooperative, more self-controlled, and with fewer problem classroom behaviors. There was no difference in teacher ratings on assertiveness. Hmong children had higher school attendance rates than other ethnic groups. Stepwise regression analyses indicated that participation in the Transition Project and Head Start, smaller family size, and older parents predicted higher reading achievement. Higher school attendance and parent involvement predicted higher mathematics achievement. (Contains 11 references.) (KDFB)

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EARLY SCHOOL PERFORMANCE OF HMONG CHILDREN IN COMPARATIVE CONTEXT

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Early school performance of Hmong children in comparative context

Daniel P. Mueller, Edith M. Gozali-Lee, and Carey Wexler Sherman

ABSTRACT

This study examines how Hmong refugee children are performing in American schools. The academic performance and classroom behavior of Hmong first and second graders is compared to that of their classmates from other ethnic backgrounds. The present study is part of the evaluation of the St. Paul Head Start-Public School Transition Demonstration. Potential factors influencing early school performance of Hmong children are examined: Head Start attendance, Transition project participation, school attendance, school change, family characteristics, and parent involvement. Progress in reading and math are evaluated over time.

LITERATURE REVIEW

This study examines how Hmong refugee children are performing in American schools. The school performance of Hmong first and second graders is compared to that of their classmates from other ethnic backgrounds. Potential factors influencing early school performance of Hmong children are examined. The present study is part of the longitudinal evaluation of the St. Paul Head Start-Public School Transition Demonstration. The Saint Paul Head Start-Public School Transition Demonstration Project is one of 31 sites across country participating in a federal demonstration project which aims to improve transition into public school and increase the school success of children from low income families, especially of children who have attended Head Start.

The Hmong people come from mountainous regions of Laos. The Hmong population in Laos lived in small villages organized by a patrilineal clan structure. Many Laotian Hmong assisted the United States military effort during the Vietnam War. Fearing retribution from the new communist government in Laos after the war, many Hmong fled the country and were placed in refugee camps in northern Thailand. Hmong families in these refugee camps sought asylum in the United States and several other countries. Beginning in late 1975, the United States government began accepting Hmong refugees, and the migration continues to the present day. There are now over 100,000 Hmong in the United States, and the Minneapolis-St. Paul area is a major site of Hmong resettlement.

The Hmong culture is characterized by an oral tradition. A written form of the Hmong language has only existed for about 40 years. Literacy levels tend to be low in the Hmong population. In fact, most Hmong adults, especially women, had no formal education before coming to the United States (McNall & Dunnigan, 1993, Sonsalla, 1984). Because of low levels

of education and proficiency in English, the Hmong have difficulty finding employment (McNall & Dunnigan, 1993). Therefore, the poverty rate is high among Hmong families (Yang and Murphy, 1993). Hmong children in the United States often enter school with limited or no English language proficiency (McInnis, Petracchi, & Morgenbesser, 1990). All children in our study entered classrooms where they were taught in English only.

Hence, poverty, language, and culture present potential barriers to Hmong children's success in American schools. At the same time, one of the most remarkable phenomena in ethnic minority research has been the high educational achievement of many Asian-Americans in the past 40 years, including Southeast Asian groups (Caplan, Choy, & Whitmore, 1992; Sue & Okazaki, 1990; Hirschman & Wong, 1986). Previous studies of Hmong in the U.S found that Hmong secondary students received higher grades and had lower rates of behavior problems and dropping out of school than their classmates (McNall, Dunnigan, & Mortimer, 1994; Rumbaut & Ima, 1988).

The education of children appears to be highly valued and supported in the Hmong community (McNall & Dunnigan, 1993). Similar to immigrant groups before them, the Hmong may place much of their hope for the future on the success of their children. They view the American education system as a means to that success.

Unlike the prior studies on Hmong students, the present research focuses on how Hmong children are faring in school in the primary grades. In addition, this study examines the role of preschool experiences (i.e., Head Start), special school programming (i.e., Transition project), parent involvement, and family characteristics in Hmong children's school performance. These factors could contribute importantly to our understanding of what accounts for the level of school success of Hmong children.

The following questions guide the evaluation research efforts presented in this report:

1. Do the family characteristics of Hmong children differ from those of children from other ethnic groups?
2. How are Hmong children progressing in school academically and socially compared to children from other ethnic groups?
3. What is the relationship of family and program factors (Head Start attendance and Transition project participation) to Hmong children's academic performance?

METHOD

Subjects

Six inner-city elementary schools in the Saint Paul School District are participating in this ongoing longitudinal study. The schools are devided into "Demonstration" and "Comparison" clusters by random assignment. Two cohorts of children and their families are being studied longitudinally at the six schools. Cohort I entered kindergarten in the 1992-1993 school year (n = 248 children) and Cohort II entered kindergarten in the 1993-1994 school year (n = 280 children). All children are from low income families; half attended Head Start and half did not. The non-Head Start sample was drawn from the same classrooms as the Head Start children and stratified random sampling was used to select these children to ensure gender, income, and ethnic similarity to the Head Start sample. Nearly half of the children (46-47%) in each cohort are Hmong, 26% are Caucasian, 12-13% are African-American, 14-16% are from other backgrounds (Hispanic/Latino, American Indian, and other Asians). Nine out of ten Hmong children are receiving ESL (English as a Second Language) services. Study findings are reported

through the end of the 1994-1995 school year, in which the Cohort I children had completed second grade (n = 215) and Cohort II children had completed first grade (n = 260).

Procedure and Measures

Children's academic achievements in reading and mathematical concepts were measured by using subtests of Woodcock-Johnson Tests of Achievement - Revised (Woodcock & Johnson, 1990). The subtests include the two tests making up Broad Reading (Letter-Word Identification and Passage Comprehension) and the two tests making up Broad Mathematics (Calculation and Applied Problems). Assessment sessions with each child were conducted at the school during the school day. The child was taken out of the classroom by a research staff and the instrument was administered one-on-one with the child in a single session in a quiet room within the school. The tests generally took about 20 minutes, although children were not timed and were given as much time as they needed. Baseline child assessments were conducted in the fall of the kindergarten year in each cohort, and subsequent assessments are conducted each spring.

Teachers were asked to rate each child's social skills using the Social Skills Questionnaire of the Social Skills Rating System (Gresham & Elliott, 1990). The Social Skills Questionnaire is a 30-item scale measuring: cooperation, assertion, and self-control. This instrument was mailed to teachers each spring. Teachers were also asked to rate problem behaviors of each Cohort I child in the spring of 1995. The Problem Behaviors scale measures the degree of externalizing, internalizing, and hyperactivity. For each social skills and problem behaviors item, teachers rated how often the child exhibited the behavior described: never, sometimes, or very often.

In addition to academic and social skills data, information regarding school attendance and receipt of special services, such as ESL, was also collected for each child. This information was obtained through the school records each spring.

A Family Interview was administered to parent/guardian of the child in the family's home. The interview was used to assess family background and parent involvement in the child's education. Family background information includes items on family size, composition, mobility and income sources, and on parent respondent age, relationship to the child, place of birth, length of time living in the United States, marital status, education, and employment status. Parent involvement includes items on parent involvement in the child's education at home, attendance at school activities for parents and families, and volunteering at school.

The Family Interview was administered orally because many parents, especially Hmong parents are illiterate or have very limited literacy in any language. The interview with Hmong parents was carefully translated into Hmong – i.e., translation from English to Hmong, back translation from Hmong to English, and then revision of the Hmong version when discrepancies appeared between the original English and the back translation. The Hmong translated interviews were administered by bilingual interviewers. The interview usually lasted about two hours. The baseline Family Interview was administered in the fall of the kindergarten year in each cohort, and subsequent interviews are conducted each spring

RESULTS

Family characteristics

There were significant differences between Hmong families and families from other backgrounds in composition, size, and mobility. Compared to other children, Hmong children were more likely to live with both their mother and father, to have more siblings, and to move less often. The characteristics of Hmong parent respondents also differed from those of other

parent respondents in a number of areas. Most Hmong parent respondents were married, while most of the other parent respondents were not. All Hmong parent respondents were born outside the United States, mostly in Laos, while very few other parent respondents were born outside the country. Hmong parent respondents tended to be slightly older than other parent respondents. Most non-Hmong parent respondents were high school graduates while only about 25% of the Hmong respondents were graduates. In fact, over half of the Hmong parent respondents in each cohort reported having no formal education. These differences between Hmong and other families were very similar in both cohorts, as shown in Figure 1.

Child's mathematics and reading achievement

Broad Reading and Broad Mathematics achievement scores on the Woodcock-Johnson Tests were compared between Hmong children and children from other backgrounds over multiple assessment points. Raw scores from the four subtests (Letter-Word Identification, Passage Comprehension, Calculation, and Applied Problems) were converted to W scores which is a transformation of the Rasch ability scale (Woodcock & Johnson, 1990). W scores meet the assumption of equal interval measurement needed for the statistical tests conducted. Higher W scores indicate higher levels of achievement.

Figure 2 and 3 graphically display changes of average scores in mathematics and reading ability of Hmong children and the other children over time. Reading achievement test results indicated no significant difference in average scores between Hmong and other children. On the mathematics achievement tests, Hmong children entered kindergarten with significantly lower scores than other children. However, by the spring of first grade they showed similar results with

their classmates. Figure 4 shows the means and standard deviations for reading and mathematics scores for Cohort I and Cohort II.

Social skills

Figure 5 shows average scores of Cooperation, Assertion, and Self-Control subscales. Results are compared between Hmong and other children in the spring of 1995 for Cohort I (second grade) and Cohort II (first grade). Teachers rated Hmong children as more cooperative and as having more self-control in both cohorts. There was no significant difference in assertion between groups in each cohort. Teachers also rated Hmong children as having fewer problem behaviors in the classroom.

School attendance

Figure 6 shows that Hmong children were absent from school less frequently than other children.

Factors that may influence the school performance of Hmong children

Stepwise regression analyses were conducted for the 1995 Cohort I sample of Hmong children to examine factors that might influence mathematics and reading achievement. Figure 7 shows the results of the stepwise regression analyses. The findings showed that participating in the Transition project and Head Start were associated with higher reading achievement. Smaller family size and greater parental age were also associated with higher reading achievement. The stepwise regression analysis for mathematical achievement yielded a different result. Higher

school attendance rates and higher levels of parent involvement were associated with higher mathematical skills.

DISCUSSION

Academic achievements and social skills

The most striking result of this study was that Hmong children, despite their disadvantage of limited proficiency in English upon entering kindergarten, were able to accomplish similar results in mathematics and reading tests to other children from low-income families by first grade. Reading achievement test results indicated that there was no difference in average scores between Hmong and other children. Hmong children and other children started with very similar baseline reading scores upon entering kindergarten. It should be noted that the baseline reading scores were low for both Hmong and non-Hmong children. Hmong children also progressed at about the same pace as other children. On the mathematics achievement test results, Hmong children started kindergarten with significantly lower scores than other children. This may be due to Hmong children's more limited proficiency in English (McInnis, Petracchi, and Morgenberger, 1990). However, by the spring of the first grade they had "caught up" with their classmates.

Teachers rated Hmong children favorably, particularly with regard to classroom behavior. Teachers rated first and second grade Hmong children as more cooperative, having more self-control, and showing fewer problem behaviors. This result is consistent with previous studies of Hmong adolescents (Rumbaut and Ima, 1988).

Factors associated with school success

Our findings indicated that several factors may be related to better school achievement for Hmong children. Being part of the Transition project and Head Start were associated with higher reading achievement. Being part of Head Start, which may have been focused on pre-reading and social skills, may have contributed to their ability to take advantage of the reading instruction in the early elementary grades. Smaller family size and older parental age were also associated with higher reading achievement. Results in math achievement indicated that higher levels of parent volunteering in the schools and higher rates of school attendance were associated with higher mathematical skills. This analysis did not point to an advantage for Hmong children who had attended Head Start or participated in the Transition project.

Early school performance results suggest that Hmong children are able to perform at similar levels to other low-income children in reading and mathematics. Head Start attendance and Transition project participation may be partly responsible for their success. As the longitudinal study progresses into the fourth operational year, we plan to do more comprehensive analyses of the factors that contribute to school success for Hmong and other children.

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FIGURE 1
PROFILE OF HMONG AND OTHER FAMILIES: COHORT I AND II[a]

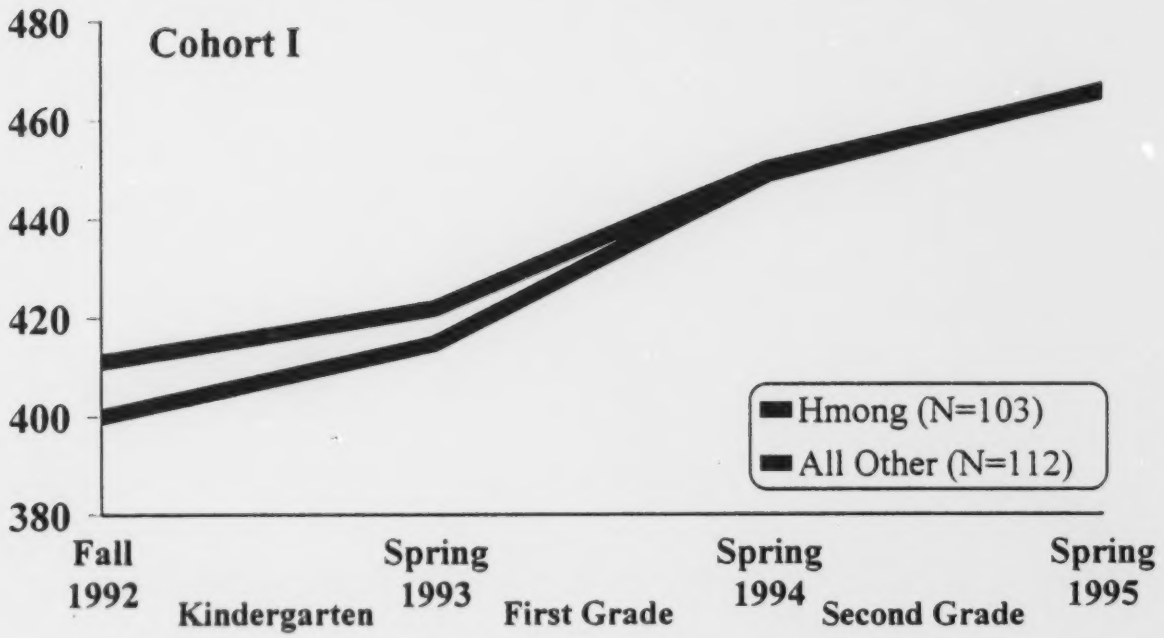
	Cohort	Hmong	All Other	Significance Test
FAMILY CHARACTERISTIC				
Percentage of children living with both birth parents	I	90%	43%	***
	II	90%	29%	***
Average number of children (≤18) in household	I	6.0	3.0	***
	II	5.9	3.0	***
Percentage of families receiving AFDC	I	70%	68%	ns
	II	73%	70%	ns
Percentage of families moving in the past year	I	18%	47%	***
	II	21%	45%	***

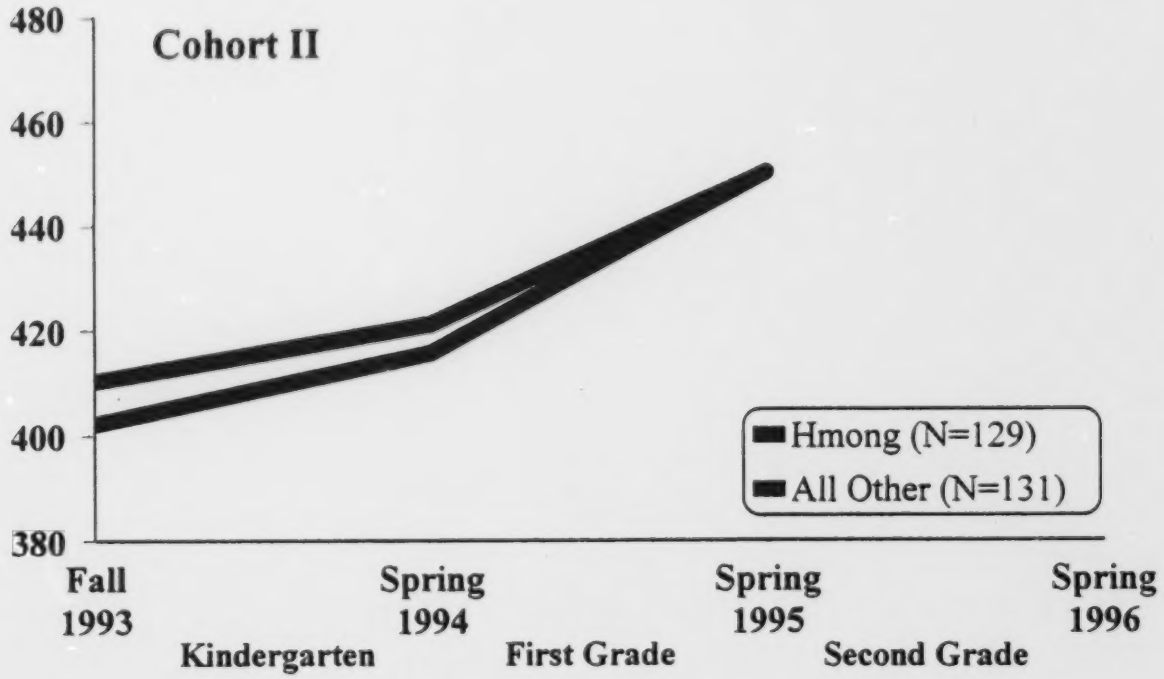
	Cohort	Hmong	All Other	Significance Test
CHARACTERISTICS OF THE PARENT RESPONDENT				
Percentage born outside the U.S.A.	I	100%	12%	***
	II	100%	6%	***
Average age of parent respondent (in years)	I	33	31	*
	II	33	30	**
Percentage married	I	93%	35%	***
	II	90%	25%	***
Percentage who were high school graduates or held a GED	I	28%	75%	***
	II	25%	77%	***
Percentage employed	I	30%	32%	ns
	II	30%	32%	ns

[a] For Cohort I, N=111 for the Hmong and N=131 for the other group. For Cohort II, N=125-132 for the Hmong and N=129-130 for the other group.

* $p < .05$
** $p < .01$
*** $p < .001$

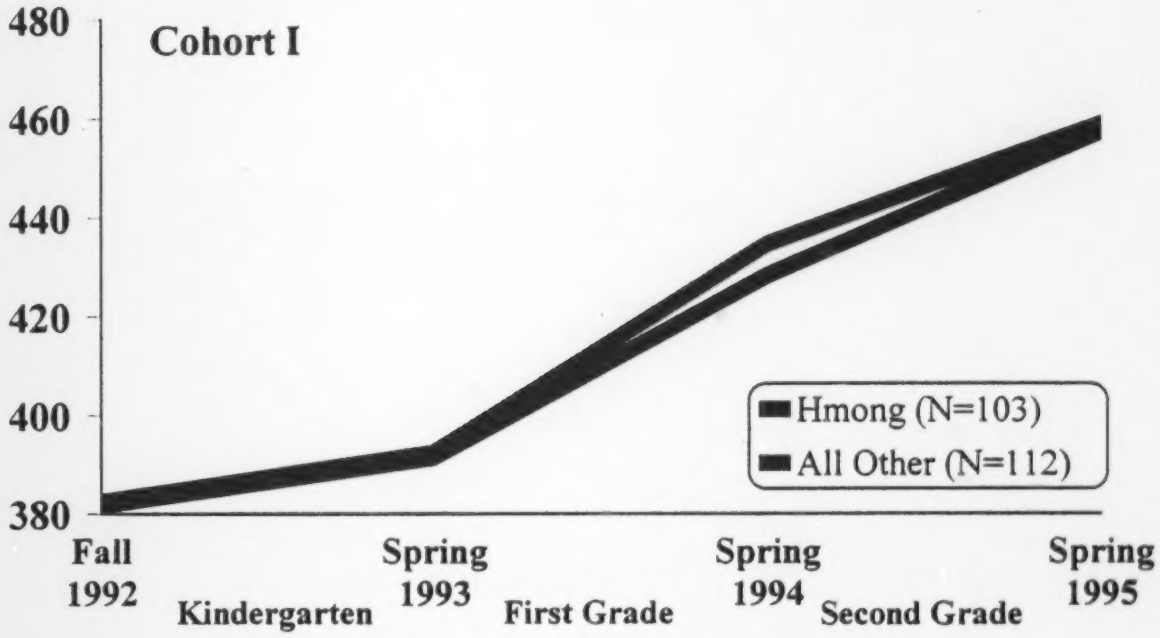
Figure 2
Mathematics Achievement[a] by Culture

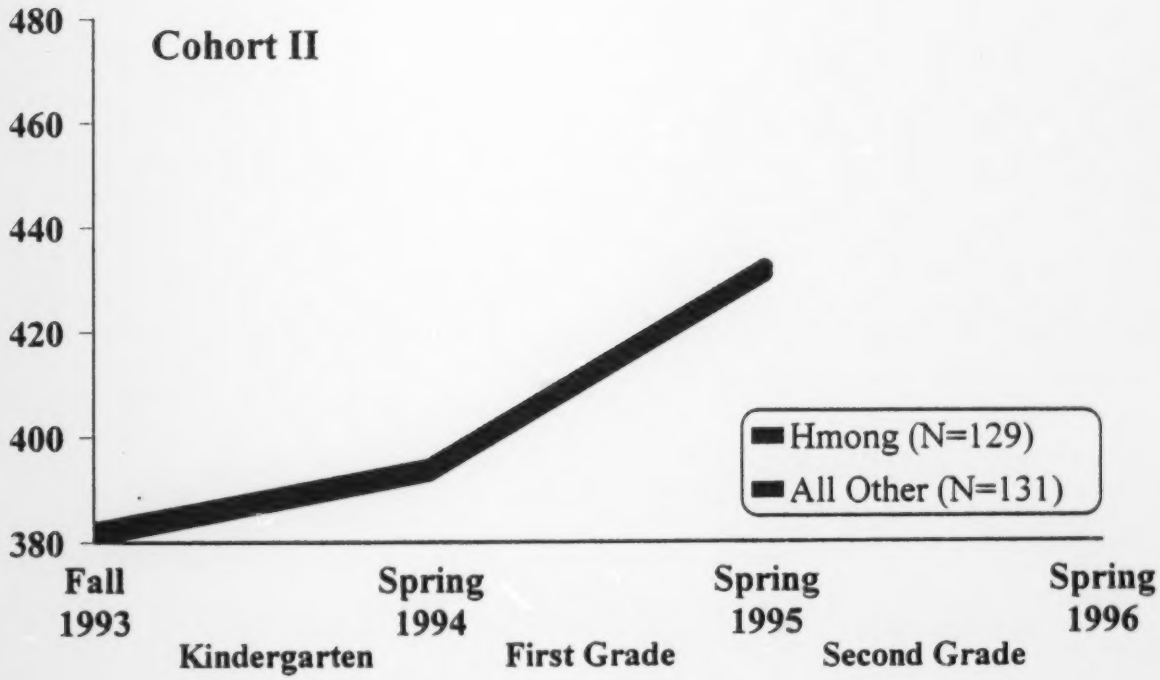




[a] Woodcock-Johnson Broad Mathematics mean "W" scores

Figure 3
Reading Achievement[a] by Culture





[a] Woodcock-Johnson Broad Reading mean "W" scores

Figure 4. Means and Standard Deviations for Reading scores (Cohort I)

Hmong/Non-Hmong		Fall 1992	Spring1993	Spring 1994	Spring 1995
Hmong	Mean	381.68	391.47	428.40	457.54
	N	103	103	103	103
	S.D.	10.69	10.94	17.78	18.78
Non-Hmong	Mean	382.51	392.37	434.68	459.07
	N	112	112	112	112
	S.D.	10.96	13.35	22.45	25.62

Means and Standard Deviations for Mathematics scores (Cohort I)

Hmong/Non-Hmong		Fall 1992	Spring1993	Spring 1994	Spring 1995
Hmong	Mean	399.99	414.78	449.00	466.33
	N	101	103	103	103
	S.D.	14.91	13.99	12.94	10.75
Non-Hmong	Mean	411.11	421.88	450.17	465.71
	N	112	112	112	112
	S.D.	12.05	14.41	15.86	15.94

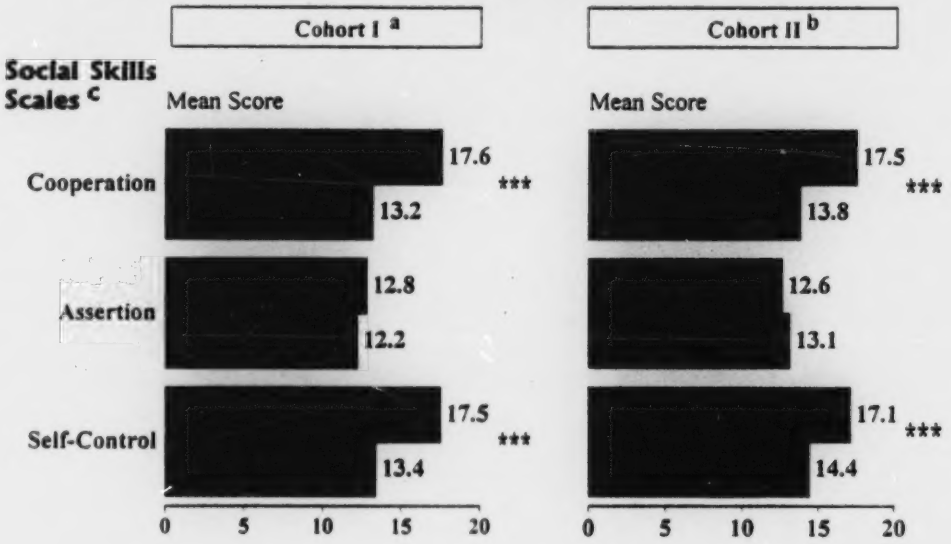
Means and Standard Deviations for Reading scores (Cohort II)

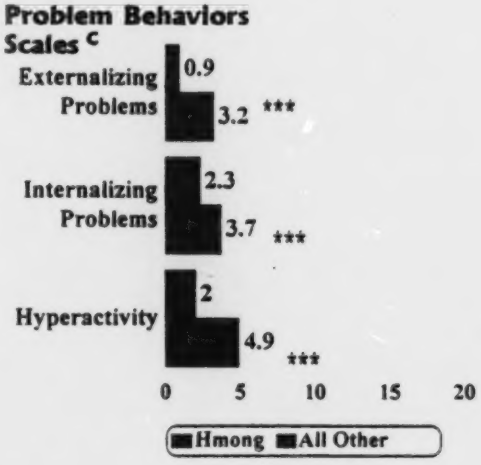
Hmong/Non-Hmong		Fall 1993	Spring1994	Spring 1995
Hmong	Mean	381.04	393.24	431.17
	N	129	129	129
	S.D.	10.95	11.39	17.84
Non-Hmong	Mean	382.29	394.41	432.50
	N	131	131	131
	S.D.	12.37	16.22	24.45

Means and Standard Deviations for Mathematics scores (Cohort II)

Hmong/Non-Hmong		Fall 1993	Spring1994	Spring 1995
Hmong	Mean	402.18	415.82	450.45
	N	129	129	129
	S.D.	15.07	14.85	13.42
Non-Hmong	Mean	410.41	421.31	450.31
	N	131	131	131
	S.D.	10.33	14.48	16.23

Figure 5
Teacher Ratings of Classroom Behavior by Culture

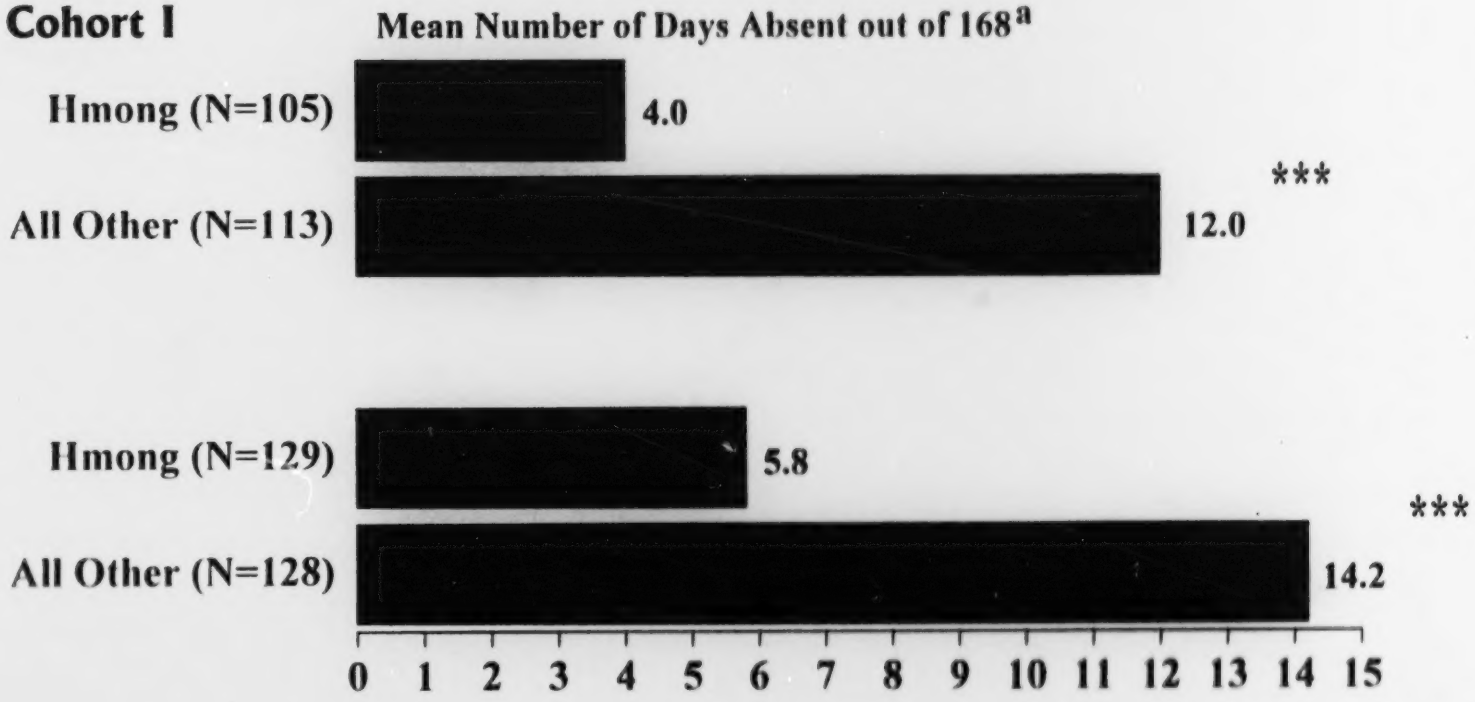




[a] Hmong, N=97-100; all other, N=113-115.
[b] Hmong, N=124, all other, N=132.
[c] Part of the Social Skills Rating System (Gresham and Elliott, 1995). The results reportd are for the spring of 1995.

*** $p < .001$

Figure 6
Number of Days Absent from School During 1994-95 by Culture



[a] Excludes those who attended less than 110 days during the 1994-95 school year.

*** P < .001

FIGURE 7
STEPWISE REGRESSION OF SPRING 1995 WOODCOCK-JOHNSON ACHIEVEMENT TEST SCORES ON BASELINE SCORES, AND FAMILY AND PROGRAM FACTORS FOR COHORT I SAMPLE OF HMONG CHILDREN

Equation	Spring 1995 Woodcock-Johnson Score[a] (Post-Test)	
	BROAD READING (N=97)	
	Beta	ΔR^2
1. Baseline Broad Reading	.46	.22
2. Age of parent (in years)	.33	.05
3. Transition programs[b]	.30	.05
4. Number of children in family	-.19	.04
5. Head Start[c]	.21	.03
6. Receive AFDC[d]	-.20	.04
Total R^2		.43
	BROAD MATHEMATICS (N=95)	
1. Baseline Broad Mathematics	.38	.16
2. Parent volunteering at school scale[e]	.22	.05
3. Average number of days absent (since kindergarten)	-.19	.03
Total R^2		.25

Note: All beta coefficients are statistically significant at the .05 level.

[a] Woodcock-Johnson scores are reported as "W" scores.

[b] Demonstration group = 1, Comparison group = 0.

[c] Attended Head Start? Yes = 1, No = 0.

[d] Receive AFDC? Yes = 1, No = 0.

[e] Higher scores indicate that the parent volunteered for more different types of activities at the child's school.